

REMARKS

Claim 9 has been amended to clarify that the compound is extracted in economical quantities. Support for this amendment is found in the specification at page 5, lines 28-32. No new matter has been added by way of this amendment.

Claims 9 and 20-24 remain rejected under 35 U.S.C. § 103(a) as being obvious over Kilby (1995), Plant Journal 8: 637-652, in view of Odell, U.S. Patent No. 5,658,772, and Kilby (1993), Trends in Genetics 9: 413-421. According to the Examiner, the methods of Kilby (1993) are not limited to studying potentially harmful mutations. Kilby (1995) was cited for teaching "the introduction into plant cells of a DNA construct comprising a promoter, a blocking sequence, and a structural gene, where the blocking sequence is flanked by a pair of directly repeated site-specific recombination sequences, wherein the structural gene is operably linked to the promoter only after the removal of the blocking sequence." While Applicants previously argued that Odell does not teach extraction of barnase, the Examiner finds that DNA and RNA encoding for barnase was extracted and that it would have been prima facie obvious to extract the barnase expressed by Odell.

Applicants respectfully submit that the pending claims are directed to the production of commercially valuable compounds. Claim 9 has been amended to clarify that the compound is extracted in economical quantities. While the Kilby references teach expression of compounds using similar constructs and Odell teaches the expression of a detrimental compound using a similar construct, none of the references, alone or in combination, teaches that a construct comprising a promoter, a blocking sequence, and a structural gene, where the blocking sequence is flanked by a pair of directly repeated site-specific recombination sequences and wherein the structural gene is operably linked to the promoter only after the removal of the blocking sequence, can be used to produce economical quantities of a detrimental compound.

Even assuming, *arguendo*, that it “would have been *prima facie* obvious and well within the means of one of ordinary skill in the art at the time the invention was made to use the strategy of expressing a biologically detrimental compound only after removal of a blocking sequence,” applicants respectfully submit that none of the Kilby or Odell references, alone or in combination, suggest the use of the claimed structures for the expression and extraction of the detrimental compound, and the references certainly do not teach or suggest extraction of economical quantities of the compound. Instead, Odell teaches the use of a construct to produce barnase for *in situ* disruption of the seed development. Odell is silent on the quantity of barnase produced. Indeed, Odell does not even indicate that an extractable amount of barnase would be produced, and certainly not an economical quantity. Similarly, that Kilby (1993) suggests the use of a construct for the study of harmful mutations in no way teaches or suggests that a mutation gene product could be expressed and extracted in economic quantities. Kilby (1995) is completely silent regarding detrimental compounds and, thus, does not suggest expression and extraction of such compounds in quantities sufficient for commercial production.

Because the Kilby and Odell references fail to teach or suggest the use of the claimed constructs for the expression and *extraction* of economic quantities of the detrimental compound, applicants respectfully request withdrawal of this rejection.

CONCLUSION

The application as amended, is believed to be in condition for allowance.

Withdrawal of the rejections and passage of the application to issuance is requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Jill T. Powlick', with a long horizontal flourish extending to the right.

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AMENDMENTS

Under 37 C.F.R. § 1.121(c)(1)(i), claims 9 and 20-21 have been amended as follows:

9. (Thrice Amended) A method for producing commercially valuable compounds, said method comprising the steps of

producing a fertile transgenic plant by introducing into plant cells a DNA construct comprising a promoter, a blocking sequence, and a structural gene coding for a compound that is detrimental to the plant and is commercially valuable, said blocking sequence being flanked by a pair of directly repeated site-specific recombination sequences and wherein the structural gene is operably linked to the promoter only after the removal of said blocking sequence, and culturing the plant cells to produce the transgenic plant;

fertilizing said transgenic plant to produce transgenic plants that are homozygous for the gene encoding said compound;

crossing said transgenic plant homozygous for the gene encoding said compound with a plant having a DNA sequence comprising a gene encoding a site-specific recombinase that recognizes said site-specific recombination sequences to produce an F1 plant or seed;

expressing the recombinase in the F1 plant or seed;

expressing the compound; and

extracting the compound in economical quantities.